

About the AstraZeneca vaccine

Version 3, April 14, 2021



Feel good about taking the AstraZeneca Vaccine. All approved COVID-19 vaccines protect against serious illness, including AstraZeneca.

Effectiveness against serious illness:

	Pfizer: 75-100% (after dose 2)
AstraZeneca: 100% (after dose 2)	Moderna: 100% (14 days after dose 2)
	Johnson & Johnson: 85.4% (28 days after dose)

All approved COVID-19 vaccines also protect against mild to moderate illness. For these symptoms, research shows that the Pfizer and Moderna vaccines may be more effective (94-95%) than AstraZeneca and Johnson & Johnson (60-70%). As developers improve their vaccines, these numbers may change. The risks of serious illness and hospitalization due to COVID-19 are well known. Experts agree that patients should accept the first vaccination offered to them. All vaccines approved for COVID-19 protect against serious illness, as well as mild to moderate illness.

Is the AstraZeneca vaccine effective against the variants?

It is normal for viruses to mutate, and we know mutations may affect how well vaccines work. In Ontario, the UK variant (B.1.1.7) is the most common right now. Research shows how well vaccines protect against the variants. Early data for AstraZeneca shows.

- **U.K. variant (B.1.1.7):** Protects well
- **South African variant (B.1.3.5):** May not protect well
- **Brazil variant (P.1):** No data, more research needed

All vaccine developers, like AstraZeneca, are improving their vaccines. Improved vaccines may protect more against the variants.

Does the AstraZeneca vaccine cause blood clots?

There is no overall increased risk of developing a blood clot after receiving any of the approved COVID-19 vaccines, including the AstraZeneca vaccine. However, the AstraZeneca vaccine is associated with extremely rare cases of blood clots that are associated with low blood platelets. These cases represent a small fraction of the tens of millions of doses delivered. While the cases are concerning enough to need investigation, it's important to remember that the risk is very small, especially compared to the proven high risk of blood clots associated with COVID-19 infection.

Why was there a dosage mistake in the AstraZeneca trial?

The mistake was due to a manufacturing issue. For one group in the AstraZeneca trials, the first shot only had a half-dose of the vaccine. The mistake was corrected quickly.

If I get the AstraZeneca vaccine, can I “top up” with the Pfizer or Moderna vaccine?

It is not recommended to “mix and match” vaccines. We do not know yet what the effect might be — either on safety or immune system protection. It may be possible to get one of these vaccines after a complete course of the AstraZeneca vaccine. More research is needed.

Can the AstraZeneca vaccine give me COVID-19?

No. Viral vector vaccines like this one contain a weakened version of a live virus that is not itself the COVID-19 virus – in this case, it's made up of parts of a common cold virus. The vaccine does not contain the parts necessary to actually cause a cold or COVID-19.

Why has the time between doses been extended? Is that safe?

Research informed the decision to increase the time between doses. Clinical trial data for AstraZeneca shows that delaying the second dose to ≥ 12 weeks is more protective than a shorter time between doses. This protection is for symptomatic illness. Research also shows that AstraZeneca is 76% effective after a single standard dose of vaccine. This protection starts 3 weeks after the first dose. It then continues until at least 3 months after the first dose and likely longer.

If more people get their first vaccine dose, it will lower the number of infections and people going to the hospital. Increased time between doses allows more people to get their first dose faster. Experts will continue to review new data. The recommended time between doses may change again if research shows it offers better protection.



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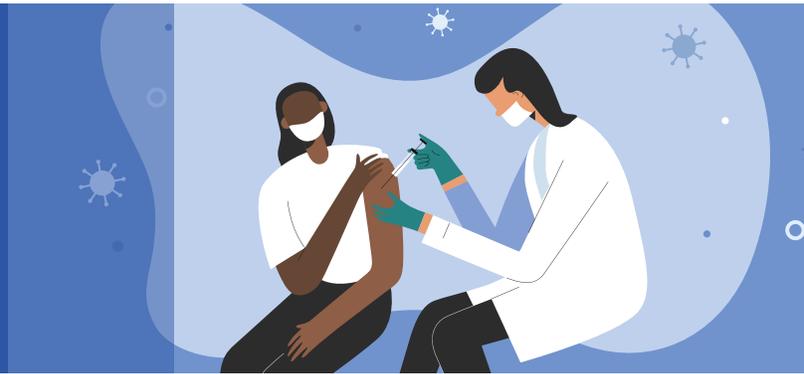
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About the Johnson & Johnson vaccine

Version 3, April 14, 2021



Feel good about taking the Johnson & Johnson vaccine. All approved COVID-19 vaccines protect against serious illness, including Johnson & Johnson.

Effectiveness against serious illness:

Johnson & Johnson: Pfizer: 75-100% (after dose 2)
85.4% Moderna: 100% (14 days after dose 2)
(28 days after dose) AstraZeneca: 100% (after dose 2)

All approved COVID-19 vaccines also protect against mild to moderate illness. For these symptoms, research shows that the Pfizer and Moderna vaccines may be more effective (94-95%) than AstraZeneca and Johnson & Johnson (60-70%). As developers improve their vaccines, these numbers may change. The risks of serious illness and hospitalization due to COVID-19 are well known. Experts agree that patients should accept the first vaccination offered to them. All vaccines approved for COVID-19 protect against serious illness, as well as mild to moderate illness.

Is the Johnson & Johnson vaccine effective against the variants?

It is normal for viruses to mutate, and we know mutations may affect how well vaccines work. In Ontario, the UK variant (B.1.1.7) is the most common right now. Research shows how well vaccines protect against the variants. Only the Johnson & Johnson vaccine had clinical trials in places where variants were common. Data shows:

- **South African variant (B.1.3.5):** Protects well
- **Brazil variant (P.1):** Protects well
- **U.K. variant (B.1.1.7):** No data. More research is needed

All vaccine developers, like Johnson & Johnson, are improving their vaccines. Improved vaccines may protect more against the variants.

Does the Johnson & Johnson vaccine cause blood clots?

There is no overall increased risk of developing a blood clot after receiving any of the approved COVID-19 vaccines, including the Johnson & Johnson vaccine. However, the Johnson & Johnson vaccine is associated with extremely rare cases of blood clots that are

associated with low blood platelets. These cases represent a small fraction of the tens of millions of doses delivered. While the cases are concerning enough to need investigation, it's important to remember that the risk is very small, especially compared to the proven high risk of blood clots associated with COVID-19 infection.

How safe is the Johnson & Johnson vaccine compared to the Pfizer and Moderna vaccines?

Serious side effects are rare for all approved vaccines. Non-serious side effects are reported the same across vaccines (e.g. sore arm, fatigue). The approved vaccines are safe for patients who have allergies, are pregnant, or are immunocompromised. All of these patients should talk to their primary care provider to know the risks or benefits of getting vaccinated. Primary care providers can answer questions based on a patient's health history.

If I get the Johnson & Johnson vaccine, can I "top up" with the Pfizer or Moderna vaccine?

It is not recommended to "mix and match" vaccines. We do not know yet what the effect might be — either on safety or immune system protection. It may be possible to get one of these vaccines after getting the Johnson & Johnson vaccine. More research is needed.

Can the Johnson & Johnson vaccine give me COVID-19?

No. Johnson & Johnson is a viral vector vaccine. It has a weakened version of a live virus that is not the COVID-19 virus. The Johnson & Johnson vaccine has parts of a common cold virus. It does not have the virus parts necessary to cause a cold or COVID-19.

Why does the Johnson & Johnson vaccine only need 1 dose when the rest need 2?

Johnson & Johnson tested both 1 dose and 2 doses of the vaccine. Since 1 dose was highly effective, Johnson & Johnson released these results. They felt it was important to recommend the vaccine as a 1-dose vaccine in order to vaccinate more people quickly. Since it does not have to be frozen (like other vaccines), it is easier to reach many people with it. Johnson & Johnson's research about the effectiveness of 2 doses is ongoing.



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